General Provisions

United States Environmental Protection Agency

Proposed Rule: Mandatory Reporting of Greenhouse Gases

The proposed Mandatory Reporting of Greenhouse Gases (GHGs) rule would require reporting of annual emissions of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), perfluorochemicals (PFCs), and other fluorinated gases (e.g., nitrogen trifluoride, hydrofluorinated ethers [HFEs]). The proposed rule (40 CFR 98) would apply to certain facilities that emit GHGs and to suppliers of fossil fuels and industrial GHGs. Manufacturers of vehicles and engines would report GHG emissions under other existing rules,[1] and are not addressed further here. Reporting would be at the facility level, except for certain suppliers that would report at the corporate level.

Facilities and suppliers that are subject to the proposed rule would have to comply with the General Provisions (40 CFR part 98, subpart A) and the provisions of all other applicable subparts of 40 CFR 98.

Who Would Report?

The proposed rule would apply to facilities that directly emit GHGs and to suppliers of fossil fuels and industrial GHGs. Tables 1 through 3 describe the direct emitters that would report, and Tables 4 and 5 describe the suppliers that would report under the proposed rule.

Table 1. If the facility contains any of the source categories listed in this table in any calendar year starting in 2010, the facility would be required to report emissions from all source categories at the facility for which calculation methodologies are provided in any subpart of the proposed rule.

Adipic Acid Production

Aluminum Production

Ammonia Manufacturing

Cement Production

Electric Power Systems that include electrical equipment with a total nameplate capacity that exceeds 17,820 pounds (7,838 kilograms) of SF_6 or PFCs.

Electricity—Generating Facilities subject to the Acid Rain Program, or that emit 25,000 metric tons of CO_2e or more per calendar year beginning in 2010.

Electronics Manufacturing Facilities with an annual production capacity that exceeds:

(A) Semiconductors: 1,080 square meters (m^2) silicon.
(B) Microelectricomechanical system: 1,020 m^2.
(C) Liquid crystal display (LCD): 235,700 m^2 LCD.

HCFC-22 Production

HFC-23 Destruction Processes that are not located at an HCFC-22 production facility and that destroy more than 2.14 metric tons of HFC-23 per year.

Lime Manufacturing

Manure Management Systems that emit, in aggregate, CH_4 and N_2O in amounts equivalent to 25,000 metric tons of CO_2e per year or more.

Landfills that *generate* CH_4 in amounts equivalent to 25,000 metric tons of CO_2e per year or more.

Nitric Acid Production

Petrochemical Production

Petroleum Refineries

Phosphoric Acid Production

Silicon Carbide Production

Soda Ash Production

Titanium Dioxide Production

Underground Coal Mines that are subject to quarterly or more frequent sampling of ventilation systems by the Mine Safety & Health Administration (MSHA).

[1] See 40 CFR parts 86, 87, 89, 90, 94, 600, 1033, 1039, 1042, 1045, 1048, 1051, 1054, 1064, and 1065. Also see the information sheet on Mobile Sources (EPA-430-F-09-047).

Table 2. If the facility does not contain any of the source categories listed in Table 1, then the facility would be required to determine whether it emits 25,000 metric tons of carbon dioxide equivalent (CO_2e) or more in combined emissions from stationary fuel combustion, miscellaneous carbonate use, and the source categories listed in this table in any calendar year starting in 2010. If so, the facility would be required to report emissions from all source categories at the facility for which calculation methodologies are provided in any subpart of the proposed rule.	
Electricity Generation	**Industrial Landfills**
Electronics—Photovoltaic Manufacturing	**Iron and Steel Production**
Ethanol Production	**Lead Production**
Ferroalloy Production	**Magnesium Production**
Fluorinated Greenhouse Gas Production	**Oil and Natural Gas Systems**
Food Processing	**Pulp and Paper Manufacturing**
Glass Production	**Industrial Wastewater**
Hydrogen Production	**Zinc Production**

Table 3. If the facility does not contain any of the source categories in Tables 1 or 2, then the facility would be required to determine if the facility emits 25,000 metric tons of CO_2e from stationary combustion in any calendar year starting in 2010. If so, the facility would report emissions from stationary fuel combustion devices only.
Boilers
Stationary Engines
Process Heaters
Combustion Turbines
Other Fuel Combustion Equipment
Note: If the maximum rated heat input capacity for all stationary fuel combustion equipment is less than 30 million British thermal units (Btu) per hour, then the facility is presumed to emit less than 25,000 metric tons of CO_2e and the facility does not have to calculate or report emissions.

Table 4. If the facility is a supplier of fossil fuels listed in this table in any calendar year starting in 2010, the facility would report the volume of fuel that is placed into the economy each year and the emissions associated with the complete oxidation of the fuel. Suppliers include producers, importers, and exporters.
Coal
Coal-based Liquid Fuels
Natural Gas
Natural Gas Liquids
Petroleum Products

Table 5. If the facility is a supplier of industrial GHGs listed in this table in any calendar year starting in 2010, the facility would report the annual volume of product that is placed into the economy and the emissions associated with the complete release of the product. Suppliers include all producers and importers or exporters supplying product that is equivalent to 25,000 metric tons of CO_2e or more when released.
Fluorinated Gases
Nitrous Oxide
Carbon Dioxide

Table 6 (see page 4) provides examples of how these applicability requirements would apply to different types of facilities and suppliers.

What Information Would Be Reported?

Under the proposal, the annual emission report would include the following information:

- Total facility emissions in metric tons of CO_2e aggregated for all source categories.
- Total emissions in metric tons of CO_2e aggregated for all supply categories.
- Emissions from each source category and supply category expressed in metric tons of each GHG.
- Onsite electricity generation in kilowatt-hours.
- Total pounds of synthetic fertilizer produced and total nitrogen contained in the fertilizer.
- Any additional information, including unit- or process-level emissions, activity data (e.g., fuel use, feedstock inputs), or quality assurance/quality control data that are specified in an applicable subpart.

How Would Reports Be Submitted?

Under the proposal, the emission reports would be submitted electronically, in a format to be specified by the EPA Administrator after publication of the final rule. Each report would be signed by a designated representative of the owner or operator, certifying under penalty of law that the report has been prepared in accordance with the requirements of the rule.

What Records Would Be Retained?

Under the proposal, each facility and supplier would retain the following records for five years in electronic or hard-copy format:

- A list of all units, operations, processes, and activities for which GHG emissions are calculated.
- The data used to calculate the GHG emissions for each unit, operation, process, and activity, categorized by fuel or material type.
- Documentation of the process used to collect the necessary data for the GHG emission calculations.
- The GHG emission calculations and methods used.
- All emission factors used for the GHG emission calculations.
- Any facility operating data or process information used for the GHG emission calculations.
- Names and documentation of key facility personnel involved in calculating and reporting the GHG emissions.
- The annual GHG emission reports.
- A log book documenting any procedural changes to the GHG emission accounting methods and any changes to the instrumentation critical to GHG emission calculations.
- Missing data computations.
- A written quality assurance performance plan.
- Any other data specified in any applicable subpart of this rule.

For More Information

This document was developed for the *Proposed* Mandatory GHG Reporting Rule. For the final document, please visit the *final* Mandatory Reporting of Greenhouse Gases Rule.

This series of information sheets is intended to assist reporting facilities/owners in understanding key provisions of the proposed rule. However, these information sheets are not intended to be a substitution for the rule. Visit EPA's Web site (www.epa.gov/climatechange/emissions/ghgrulemaking.html) for more information, including the proposed preamble and rule and additional information sheets for specific industries, or go to <www.regulations.gov> to access the rulemaking docket (EPA-HQ OAR-2008-0508). For questions that cannot be answered through the Web site or docket, call 1-877-GHG-1188.

Table 6. Examples of how the applicability criteria would apply at different types of facilities.

Facility Description	Required to Submit a GHG Report?	Explanation
A lime manufacturing plant emits 22,000 tons per year (tpy) CO_2e from lime kilns.	Yes	Because lime manufacturing is a source category that is listed in Table 1, the facility would submit a report regardless of the amount of GHGs emitted.
A **pulp mill** emits 22,000 tpy CO_2e in combined emissions from stationary fuel combustion, digester vessels, carbonates, and wastewater treatment operations.	No	Because pulp and paper manufacturing is a source category listed in Table 2, the facility would report only if emissions are 25,000 tpy CO_2e or more.
A **cheese manufacturing plant** contains: • A gas-fired boiler that emits 15,000 tpy CO_2e; • A biomass-fired boiler that emits 10,000 tpy CO_2e; and • A wastewater treatment operation that emits 9,000 tpy CO_2e.	No	Because food processing is a source category listed in Table 2, the facility would report if emissions are 25,000 tpy CO_2e or more. Because combustion of biogenic fuels is excluded from the applicability computation, nonbiogenic GHG emissions for the facility are 24,000 tpy CO_2e.
An **assembly plant** emits 30,000 tpy CO_2e from a coal-fired boiler.	Yes	Assembly plants are not a listed source category in Tables 1 or 2, but the facility nevertheless would submit a report because emissions from stationary fuel combustion are 25,000 tpy CO_2e or more.
A **university** emits 24,000 tpy CO_2e from a cogeneration unit and 2,000 tpy CO_2e from coal storage.	No	Because the rule does not prescribe a method for calculating GHG emissions from coal storage, coal storage emissions are not counted in determining applicability.
An **industrial gas company** emits 24,000 tpy from the production of SF_6.	Yes (as a supplier) No (as a facility)	The company would be subject to reporting as a supplier (40 CFR part 98, subpart OO) because all industrial GHG suppliers would report emissions from product sales. The company would not report fugitive emissions from the SF_6 production processes (40 CFR part 98, subpart L) because emissions are below 25,000 tpy CO_2e threshold for Table 2 source categories.
A **municipal solid waste landfill** generates an amount of CH_4 equivalent to 40,000 tpy CO_2e, but collects and combusts 75 percent of the CH_4, emitting only 10,000 tpy CO_2e.	Yes	For a municipal landfill, the 25,000 tpy CO_2e reporting threshold is based on gas generation, not on actual emissions.
A **petrochemical plant** also has an onsite wastewater treatment operation and stationary fuel combustion units. Total facility emissions are 24,000 tpy CO_2e.	Yes	Because petrochemical production is a source category listed in Table 1, the facility would report emissions from all source categories for which the rule contains calculation methods (including wastewater treatment and stationary fuel combustion), regardless of the magnitude of the emissions from the other collocated source categories.
A **semiconductor manufacturing facility** produces 900 m^2 of silicon per year and operates fuel combustion devices that collectively emit 26,000 tpy CO_2e.	Yes	Because the facility produces less than 1,080 m^2 of silicon per year, the silicon manufacturing process does not meet the definition of semiconductor manufacturing, as defined in Table 1. Therefore, it would evaluate emissions from fuel combustion sources. Because emissions from stationary fuel combustion exceed 25,000 tpy CO_2e, the facility would report emissions from fuel combustion, but not from semiconductor manufacturing.

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